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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,618	12/05/2007	Tamar Eilam	YOR920030587US1	3559

48915 7590 03/22/2012
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EXAMINER

TOWFIGHI, AFSHAWN M

ART UNIT	PAPER NUMBER
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2469

NOTIFICATION DATE	DELIVERY MODE
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03/22/2012

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/587,618	EILAM ET AL.	
	Examiner	Art Unit	
	AFSHAWN TOWFIGHI	2469	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/4/11.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,10,13-23,25-37 and 44-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,10,13-23,25-37 and 44-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-946) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-3, 10, 13-23, 25-37, and 44-47 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/25/11 has been entered.

Response to Arguments

2. Applicant's arguments, see page 14, filed 1/4/11, with respect to 35 U.S.C. 101 rejections of claims 14 and 26 have been fully considered and are persuasive. The 35 U.S.C. 101 rejection of claims 14 and 26 has been withdrawn since the claim recites "device".
3. Applicant's arguments filed 08/12/2010 have been fully considered but they are not persuasive.
4. On page 15 of the applicant's response, the applicant argues that the combination of references does not teach "the at least one policy for controlling the number of reserve resources available to process requests from the at least one domain

Art Unit: 2469

and the sub-domains,” and “acquisition of at least one resource from resource libraries for said at least one domain”.

5. The examiner respectfully disagrees. Hauser Col 1 L1-28 teaches levels of entities (domains and sub-domains) that are allocated resources(some are in use some being "reserve"). Hauser teaches usage levels "policies" that control the number of resources (including those not currently in use) that are available for allocation (to process requests). Therefore, as the claim language reads, the combination of references does teach the argued limitations.

6. On page 18 of the applicant's response, the applicant argues that the combination of references fails to teach “enabling resource sharing of public resource pools between the different organizations based on an acquisition policy, the acquisition policy determining which resources are added or removed from the public resource pools for all of the different organizations.”

7. The examiner respectfully disagrees. The applicant's response is moot in view of new grounds of rejection. Hauser Col 1 L1-28 teaches levels of entities (domains and sub-domains) that are allocated resources(some are in use some being "reserve"). Hauser teaches usage levels "policies" that control the number of resources (including those not currently in use) that are available for allocation (to process requests). Therefore, as the claim language reads, the combination of references does teach the argued limitations.

8. On page 19 of the applicant's response, the applicant argues that the combination of references does not teach one or more root collectors and one or more

Art Unit: 2469

non-root collectors, said one or more root collectors comprising a public resource pool, said one or more non-root collectors comprising a private resource pool each of said collectors being linked to at least one other collector.

9. The examiner respectfully disagrees. Pitts teaches one or more root collectors and one or more non-root collectors (Col 1 L19-37, the root collector is the NDC server site and the non-root are the client and intermediate sites), said one or more root collectors comprising a public resource pool (Col 1 L19-37, the NDC's harddrive is a public pool of resources accessible by all NDC's), said one or more non-root collectors comprising a private resource pool (Col 1 L19-37, the intermediate NDC's each have their own hard disks (private pool)), each of said collectors being linked to at least one other collector. The claim language is broad and not specific (root collector, public resource, private, pool). Therefore, as the claim language reads, the combination of references does teach the argued limitations.

10. On page 20 of the applicant's response, the applicant argues that the combination of references does not teach "even when the resources are not currently available" with respect to claim 44.

11. The examiner respectfully disagrees. Lumelsky, Col 5 L5-30 teaches allocating resources in a resource envelope in a time variant manner, meaning the resource may be unavailable at the current time but it will be allocated for a later time. Therefore, as the claim language reads, the combination of references does teach the argued limitations.

Art Unit: 2469

12. Regarding to claim 101 rejection of claim 13, applicant argues computer readable storage medium tangibly storing instructions, which is non transitory. However, it can be reasonably interpreted that the computer readable medium or program storage device would include embodiments including propagation media, such as carrier waves, which fail to establish a statutory category of invention. Signals and carrier waves are tangible since they have the ability to be come into contact with.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. **Claim 13** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 13 recites “An article of manufacture comprising a computer readable storage medium storing instructions, which when executed by a computer implement....”

In Specification (US 2008/0216082), recites, as follows:

[0202] Thus the invention includes an article of manufacture which comprises a computer usable medium having computer readable program code means embodied therein for causing a function described above. The computer readable program code means in the article of manufacture comprises computer readable program code means for causing a computer to effect the steps of a method of this invention. Similarly, the present invention may be implemented as a computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing a function described above. The computer readable program code

Art Unit: 2469

means in the computer program product comprising computer readable program code means for causing a computer to effect one or more functions of this invention. Furthermore, the present invention may be implemented as a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for causing one or more functions of this invention.

However, applicant has not provided evidence to limit the specific statutory embodiments, "computer readable storage medium" belongs to the statutory embodiments. Since the applicant fails inclusively and specifically provide antecedent basis to limit the specific statutory embodiments, "computer readable storage medium" belongs to the intrinsic non-statutory embodiments such as carrier signal, radio wave, light wave, and transmission medium/media. Signals and carrier waves are tangible since they have the ability to be come into contact with.

Note that signal claims are not directed to a process since they do not cover an act or series of acts. No part of the signal is a mechanical "device" or "part." A propagating electromagnetic signal is not a "machine" as that term is used in § 101. Signals, standing alone, are not "manufactures" under the meaning of that term in § 101. A signal comprising a fluctuation in electric potential or in electromagnetic fields is not a "chemical union," nor a gas, fluid, powder, or solid. Signals are not "compositions of matter." Thus, a transitory, propagating signal is not a "process, machine, manufacture, or composition of matter. Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter. (see *In re Nuijten*, 500 F. 3d 1346 1356 n.7 (Fed. Cir 2007).

In view of the above analysis, claim 13 is ineligible for patent protection as failing to be limited to embodiments which fall within a statutory category.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. **Claims 1 - 3, 10, 13 – 16, 34, and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shanumgam (US Patent 6,708,187) in view of Hauser (US Patent 5,889,956).

17. **Regarding to claim 1**, Shanumgam teaches a method comprising providing an automatic hierarchical management of a computing infrastructure for at least one domain for an entity, said step of providing hierarchical management comprising [Column 12 Line 52 – 62]:

Obtaining a hierarchical representation of said at least one domain [Figure 13, Column 12 Line 52 – 62: hierarchical organization of VPN clouds], said representation including:

A list of computing environments to be managed [Figure 13: list VPN clouds to be managed].

Instantiating the representation [Figure 13, Column 12 Line 26 – 40: displaying VPN clouds representation].

Shanumgam does not expressly teach “*at least one policy controlling acquisition of at least one resource from resource libraries for said at least one domain, and any sub-domains within said at least one domain; the at least one policy for controlling the number of reserve resources available to process requests from the at least one domain and the sub-domains.*”

However, Hauser teaches hierarchical resource management (sub-domains) specifying maximum amount (acquisition policy) of resource to be allocated to the respective entity [Column 2 Line 1 – 28]; the at least one policy for controlling the number of reserve resources available to process requests from the at least one domain and the sub-domains (Col 2 Line 1-28, the “policies” control a maximum number of resources that are currently “in reserve” that will be available to process requests from the entities and sub-entities). It would have been obvious to one of ordinary skill in the art at the time of the invention to have resources taught by Hauser in hierarchical environment taught by Shanumgam for the purpose of improve efficiency and reduce the cost of resources [Hauser Column 1 Line 33 – 55].

18. **Regarding to claim 2**, Hauser teaches deriving a set of resources required for said list of computing environments in constructing said hierarchical management [Column 2 Line 1 – 26: resources governed by resource usage levels].

Providing resources for said set of resources to said at least one domain [Figure 5, Column 6 Line 26 – 42]. It will be obvious to combine Hauser for the same reasons set for claim 1 above.

Art Unit: 2469

19. **Regarding to claim 3**, Shanumgam teaches further comprising at least one limitation taken from a group of limitations consisting of:

further comprising updating said at least one policy of the representation;

further comprising utilizing library services;

further comprising associating each computing environment with a particular sub-domain;

wherein the step of utilizing includes reserving a set of resources required by said list of computing environments;

further comprising acquiring the set of resources and using at least one resource from said set of resources;

wherein said at least one domain is a plurality of domains;

wherein at least one domain from said at least one domain is a sub domain of another domain;

further comprising associating at least one library service from said library services with at least one collector;

wherein both the quantity and types of base resources change over time;

wherein said method is employed in providing service on-demand;

wherein said at least one resource is a base or composite resource;

further comprising organizing said at least one resource into a service offered to a plurality of customers; [Column 12 Line 40 – 45: VPN cloud allow users to access sites (service)].

further comprising allocating base resources to a library service;

further comprising formulating composite resources from base resources satisfying a service, description;

further comprising allocating composite resources to a library service; and further comprising allocating services to a library service

20. **Regarding to claim 10**, Shanumgam teaches wherein at least one of said at least one domain is a root domain [Column 12 Line 52 – 63: hierarchical organization of VPN clouds, VPN cloud is top of the hierarchy. Therefore, VPN cloud is root domain].

21. **Regarding to claim 13**, Shanumgam and Hauser teaches an article of manufacture comprising a computer readable storage medium storing instructions, which when executed by a computer implement provisioning of hierarchical management of at least one domain for a computing utility [Shanumgam Column 12 Line 41 – 45], the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 1 [see claim 1 rejection above].

22. **Regarding to claim 14**, Shanumgam and Hauser teaches a program storage device readable by machine [Shanumgam Column 4 Line 6 – 21], tangibly embodying a program of instructions executable by the machine [Shanumgam Column 12 Line 41 – 45] to perform method steps for providing hierarchical management of at least one domain for a computing utility, said method steps comprising the steps of claim 1[see claim 1 rejection above].

23. **Claim 15** is similar to claim 1. Claim 15 is rejected under the similar grounds.

Art Unit: 2469

24. **Regarding to claim 16**, Shanumgam and Hauser teaches computer program product comprising a computer usable storage medium storing instructions [Shanumgam Column 12 Line 41 – 45], which when executed by a computer implement provisioning of hierarchical management of at least one domain for a computing utility, the compute readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect the functions of claim 15 [see claim 15 rejection above].

25. Regarding to **claim 34**, Hauser teaches a requesting computing environment making a request for a particular combination of resources [Column 7 Line 28 – 35: requester (requesting computing environment) requesting or a memory resource].

checking said representation of the acquisition policy of said requesting computing environment to verify that satisfaction of the request for the particular of resources is within the acquisition policy of said requesting computing environment; and [Figure 3, Column 7 Line 28 – 35: determining the request will be granted or rejected based on the minimum provided and maximum allowed]

repeating the step of checking for all parent collector of said requesting collector until any root collector is reached [Figure 3 Part 320, 322: repeating until reaching level N (root collector)]. It will be obvious to combine Hauser for the same reasons set for claim 1.

26. **Regarding to claim 35**, Hauser teaches further comprising determining if the acquisition policy is satisfied all the way to any root collector; if the acquisition policy is satisfied the request is granted otherwise the request is denied [Figure 3, Column 7 Line

Art Unit: 2469

28 – 35: determining the request will be granted or rejected based on the minimum provided and maximum allowed (policy) in each level (all the way to any root collector)].

It will be obvious to combine Hauser for the same reasons set for claim 1.

27. **Claims 36 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shanumgam and Hauser as applied to claim 1 above, and further in view of Pitts (US Patent 6,847,968).

28. **Regarding to claim 36**, Shanumgam teaches hierarchical management, but does not expressly teach *making a request for a particular combination of resources*.

However, Pitts teaches requesting data (resource) [Column 2 Line 36 – 39].

Determining a starting collector to start a search for the combination of resource [Column 2 Line 40 – 49: flowing the request to NDC (collector)].

Checking if the starting collector has at least one resource from said combination of resources, said at least one resource being a located resources [Column 2 Line 61 – 67]

checking if there is at least one library which includes at least one resource from said combination of resources, said at least one resource being a located resources [Column 2 Line 61 – 67]

repeating the step of checking at each collector from a starting collector to any root collector [Column 2 Line 61 – 67]

if all resources of said combination are located resources reserving all located resources, otherwise denying the request [Column 2 Line 61 – 67: if the requested data isn't present in the NDC, then NDC access elsewhere for missing data, which means it

Art Unit: 2469

checks collectors for data]. It would have been obvious to one of ordinary skill in the art at the time of the invention to request data and searching for data taught by Pitts in hierarchical management taught by Shanumgam for the purpose of permit secure distribution of files among networked digital computers and to maintain consistency [Column 5 Line 22 – 25].

29. Regarding to **claim 37**, Pitts teaches further comprising calling arbitration to continue locating all resources from said combination of resources [Column 2 Line 61 – 67: if the requested data isn't present in the NDC, then NDC access elsewhere for missing data].

30. **Claims 17 – 23, and 25 - 28** are rejected under 35 U.S.C. 103 (a) as being unpatentable over Pitts (US Patent 6,847,968) in views of Shanumgam (US Patent 6,708,187) and Kamiya (US Patent 5,923,845), and further in view of Hauser.

31. **Regarding to claim 17**, Pitts teaches a method comprising: creating an automatic hierarchical representation of a computing infrastructure, for an entity comprising organizing the entity into a domain tree of domains [Column 5 Line 44 – 59: establishing a hierarchical domain tree that encompasses digital computers].

Wherein each domain represents a different organization within the entity [Column 5 Line 44 – 59: root domain representing digital computer files].

Said each *domain obtains computing environments* and resources from a computing utility [Figure 3, Column 6 Line 53 – 67: each network distributed caches (domain) with file system tree (resources)]. Pitts does not expressly teach *obtaining computing environment*.

However, Shanumgam teaches hierarchical organization of VPN clouds (computing environment) [Figure 13, Column 12 Line 52 – 62]. It would have been obvious to one of ordinary skill in the art at the time of the invention to obtain computing environment taught by Shanumgam in hierarchical domain tree taught by Pitts for the purpose of allowing businesses to efficiently communicate with their business partners [Column 1 Line 23 – 31].

Pitts and Shanumgam do not expressly teach *the computing utility comprising multiple root collectors, each root collector representing the organization within the entity, and enabling resource sharing of public resource pools between the different organizations.*

However, Kamiya teaches the computing utility comprising multiple root collectors [Figure 1, parts 11, 121, and 131, Column 7 Line 16 – Column 8 Line 5: root collectors], Each root collector representing the organization within the entity [Column 7 Line 16 – Column 8 Line 5: each root collector representing each user/organization], and enabling resource sharing of public resource pools between the different organization [Column 15 Line 55 – Column 16 Line 3: sharing information between user/organization]. It would have been obvious to one of ordinary skill in the art at the time of the invention to have sharing information between organizations taught by Kamiya in hierarchical organization taught by Pitts for the purpose of improve disparate conventional systems [Kamiya Column 3 Line 57 – Column 4 Line 2].

The combination of Shanumgam, Kamiya and Pitts does not explicitly teach Based on an acquisition policy, the acquisition policy determining which resources are added or removed from the public resource pools for all of the different organizations.

However, Hauser teaches Based on an acquisition policy, the acquisition policy determining which resources are added or removed from the public resource pools for all of the different organizations (Col 2 L1-28, usage levels (policy) for determining which resources can(add) and cannot(remove) service entities(organizations) because the entity has reached its maximum usage level).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have resources taught by Hauser in hierarchical environment taught by Shanumgam for the purpose of improve efficiency and reduce the cost of resources [Hauser Column 1 Line 33 – 55].

32. Regarding to **claim 18**, Shanumgam teaches determining computing environments to be associated with each domain [Figure 13, Column 12 Line 52 – 62: hierarchical organization of VPN clouds (computing environment)].

Determining an acquisition policy and a *distribution policy* for each domain [Figure 13, Column 13 Line 1 – 6: VPN rules (acquisition policy)].

Shanumgam does not expressly teach *distribution policy*.

However, Pitts teaches enforcing file access policies (distribution policy) [Column 5 Line 66 – Column 6 Line 19].

Converting the domain tree into a collector hierarchy [Column 5 Line 44 – 59: establishing a hierarchical domain tree].

Connecting said collector hierarchy into a hosted root collector for a hosted environment [Column 5 Line 44 – 59: establishing the hierarchical domain tree by exporting (connecting) a root for the domain tree]. It will be obvious to combine Shanumgam and Pitts for the same reasons set for claim 17 above.

33. Regarding to **claim 19**, Pitts teaches further comprising using said hosted environment to provision at least one computing environment and at least one resource to said entity [Column 5 Line 60 – 65: retrieving files stored in file system tree through domain root].

34. Regarding to **claim 20**, Pitts teaches wherein the step of connecting is performed by a service provider [Column 5 Line 44 – 59: digital computer (server) establishes the hierarchical domain tree by exporting (connecting) a root for the domain tree].

35. Regarding to **claim 21**, Shanumgam teaches wherein the step of connecting includes connecting collector hierarchies for a plurality of customers of the hosted environment into the hosted root collector, [Figure 13: users (customers) connected to VPN cloud (root collector)]. It will be obvious to combine Shanumgam for the same reasons set for claim 17 above.

36. Regarding to **claim 22**, Pitts teaches inserting a collector as a hierarchy root collector of the collector hierarchy, [Figure 3 part 50, Column 7 Line 27 – 42: the network distributed caches (collector) is inserted in root domain], determining a number of computing environments of the root domain of the domain tree and whether a sub domain of a root domain of the domain tree exist, if there is only one computing environment and no sub domains of a root domain of the domain tree, inserting a PMRS

Art Unit: 2469

in the collector hierarchy and terminating the step of converting, otherwise, for each computing environment of said root domain of the domain tree, adding a collector and PMRS to the root collector of said collector hierarchy [Abstract, Column 7, Line 1 – 14];

determining sub domains of said root domain of the domain tree that have only one computing environment:

for each sub domain of said root domain of the domain tree that has only one computing environment and no other sub domain, inserting a PMRS into the collector hierarchy, for each sub domain of said root domain of the domain tree that has more than one computing environment or other sub domains, placing said each sub domain on a domain processing list [Abstract, Column 7, Line 1 – 14]; and

repeating the step of inserting a collector, the step of determining a number of computing environments for each domain on the domain processing list as if it were a root domain, and the step of determining sub domains of said root domain of the domain tree that have only one computing environment, until said domain processing list is empty [Abstract, Column 7, Line 1 – 14: distributed data service (PMRS) in domains and sub-domains].

37. **Regarding to claim 23**, Pitts teaches wherein the step of connecting is performed by a service provider, [Column 5 Line 44 – 59: digital computer (server) establishes the hierarchical domain tree by exporting (connecting) a root for the domain tree].

38. **Regarding to claim 25**, an article of manufacture comprising a computer usable storage medium storing instructions [Pitts Column 1 Line 38 – 50], which when

Art Unit: 2469

executed by a computer implement a method for creating a hierarchical representation of an entity, the method comprising the steps of claim 17 [see rejection for claim 17 above].

39. **Regarding to claim 26**, a computer readable storage device readable the computer readable storage device storing instruction executable by the computer [Pitts Column 1 Line 38 – 50] to perform method steps for creating a hierarchical representation of an entity, said method steps comprising the steps of claim 17 [see rejection for claim 17 above]

40. **Claim 27** is similar to claim 17. Therefore, claim 27 is rejected under the similar ground.

41. **Regarding to claim 28**, a computer program product comprising a computer usable storage medium storing instructions [Pitts Column 1 Line 38 – 50], which when executed by a computer implement a method for the creation of a hierarchical representation of an entity, the method performing the functions of claim 27 [see rejection for claim 27 above].

42. **Claims 29 and 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitts (US Patent 6,847,968) in view of Jennings (US Publication 2002/0099842).

43. **Regarding to claim 29**, Pitts teaches an apparatus comprising a plurality of collectors for representing a plurality of domains in a computing utility (Col 1 L19-37 Fig 1, the NDC's are a plurality of collectors) the plurality of collectors comprising: one or more root collectors and one or more non-root collectors (Col 1 L19-37, the root collector is the NDC server site and the non-root are the client and intermediate sites),

Art Unit: 2469

said one or more root collectors comprising a public resource pool (Col 1 L19-37, the NDC's harddrive is a public pool of resources accessible by all NDC's), said one or more non-root collectors comprising a private resource pool (Col 1 L19-37, the intermediate NDC's each have their own hard disks (private pool)), each of said collectors being linked to at least one other collector, each collector having: a controller to control reserved resources for each domain [Column 4 Line 47 – 67: NDC (collector) declaring itself as consistency control site].

a policy advisor to interpret *acquisition policies* [Column 12 Line 25 – 34: domain manager in NDC using policy data to regulate access to file].

Pitts does not expressly teach *acquisition policies*.

However, Jennings teaches distribution rules (policy) used to manage capacity (acquisition) [Paragraph 53].

A resource manager to manage resource acquisition for computing environments, the resource manager managing resource acquisition based on the acquisition policies [Paragraph 53: distribution rules to manage capacity for resources]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use acquisition policy taught by Jennings in control of reserved resources taught by Pitts for the purpose of increase control over content management and for the sufficient notions of resource allocation and control [Jennings Paragraph 7].

44. **Regarding to claim 47**, a computer program product comprising a computer usable storage medium storing instructions [Pitts Column 1 Line 38 – 50], which when

Art Unit: 2469

executed by a computer implement a method for controlling and managing resources, the method performing the functions of claim 29 [see rejection for claim 29 above].

45. **Claims 30 – 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitts and Jennings as applied to claim 29 above, and further in view of Antognini (US Patent 5,649,185).

46. Regarding to **claim 30**, Pitts teaches collector, but does not expressly teach *said apparatus further comprising at least one base resource library service, at least one collector is associated with at least one of said at least one base resource library service, said base resource library service having a Resource Operations interface and a Catalog interface*

However, Antognini teaches library server with ser of order routines (resource operation) and catalog [Column 5 Line 60 – Column 6 Line 6]. It would have been obvious to one of ordinary skill in the art at the time of the invention to have library server taught by Antognini in collector taught by Pitts for the purpose of provide access to a library user seeks to store, retrieve, or replace a data object in the library [Column 2 Line 1 – 3].

47. Regarding to **claim 31**, Antognini teaches wherein said at least one base resource library service includes at least one public Base Resource Library Service to provide library services to at least one domain, said public base resource library service having a Resource Operations interface and a Catalog interface [Figure 1, Column 5 Line 4 – 13: library server providing service to library client (domain)].

Art Unit: 2469

48. Regarding to **claim 32**, Antognini teaches wherein said Resource operation interface provides an operation taken from a group of operations consisting of: Reserve, CancelReservation, CheckIn, CheckOut, Query, Update; and any combination of these operation [Column 5 Line 60 – Column 6 Line 6: library server's set of order routines including store (CheckIn) and Retrieve (CheckOut)].

49. Regarding to **claim 33**, Antognini teaches wherein said Catalog operations interface provides an operation taken from a group of operations consisting of: Reserve, Add, Remove, Update, Query, and any combination of these operation [Column 7 Line 45 – 49: query ordering a library catalog inquiry and update ordering a change to records in a library catalog].

50. **Claims 44 and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lumelsky (US Patent 6,460,082) in view of Antognini (US Patent 5,649,185).

51. Regarding to **claim 44**, Lumelsky teaches an architecture for a computing utility comprising an apparatus to provide at least one service for a plurality of clients, said apparatus comprising:

A Base Resource Distribution Service to allocate resources to said at least one service, said Base Resource Distribution Service providing a reservation of resources even when resources are not currently available [Column 5 Line 5 – 30: service unit allocating resource for allocation of resources into resource envelopes that may be time variant meaning that allocating a resource at a time although it is not currently free]

Said Base Resource Distribution Service having at least one collector [Column 5 Line 31 – 55: server with meta-resource (collector)].

At least one Provisioned and Managed Resource Service coupled to said Base Resource Distribution Service to provision and manage said resources for said at least one service [Column 5 Line 5 – 30: server able to provisioning media].

Lumelsky does not expressly teach *at least one Base Resource Library Service coupled to said Base Resource Distribution Service to provide reservation and allocation of resources.*

However, Antognini teaches library server [Column 5 Line 60 – Column 6 Line 6]. It would have been obvious to one of ordinary skill in the art at the time of the invention to have library server taught by Antognini in base resource distribution service taught by Lumelsky for the purpose of provide access to a library user seeks to store, retrieve, or replace a data object in the library [Column 2 Line 1 – 3].

52. Regarding to **claim 46**, Lumelsky teaches wherein the architecture is used by an on-demand service [Column 5 Line 5 – 30: the service unit is used in service on-demand].

53. **Claim 45** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lumelsky and Antognini as applied to claim 44 above, and further in view of Pitts (US Patent 6,847,968).

54. Regarding to **claim 45**, Lumelsky teaches an arbiter coupled to said base resource distribution service and available to each of said collectors, said arbiter provides dynamic resource allocation to each collector of said computing utility [Column 5 Line 5 – 30: service unit allocating resource].

Lumelsky teaches collector, but does not expressly teach *at least one collector, each collector anchoring a representation of a particular domain and holds polices of said particular domain and holds resources reserved for said particular domain.*

However, Pitts teaches NDC (collector) declaring itself as consistency control site [Colum 4 Line 47 – 67], domain manager in NDC using policy data to regulate access to files [Column 12 Line 25 – 34], and domain manager in NDC [Column 7 Line 27 – 42]. It would have been obvious to one of ordinary skill in the art at the time of the invention to have collector taught by Lumelsky with policies of domain taught by Pitts for the purpose of permit secure distribution of files among networked digital computers and to maintain consistency [Pitts Column 5 Line 22 – 25]..

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AFSHAWN TOWFIGHI whose telephone number is (571)270-7296. The examiner can normally be reached on Monday - Friday 9:00 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ian Moore can be reached on (571)272-3085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2469

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/AFSHAWN TOWFIGHI/
Examiner, Art Unit 2469